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AUTHOR	Braddock, Jomills Henry, II
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ABSTRACT

Using data from a survey of 265 randomly selected black students attending two predominantly black and two predominantly white colleges in Florida, this study examines the hypothesis that black students who attend desegregated high schools are more likely to attend desegregated colleges. Sex and social class as background variables along with schooling and achievement factors (high school racial composition and grade-point average) and college inducements (academic reputation, financial aid, low cost) are linked in a causal model to the predominant racial type of the college attended. The results indicate that choice of a desegregated college (predominantly white college) depends on various types of antecedents; however, desegregation practice--the experience of having attended a desegregated high school--manifests some of the largest direct and total effects among the total set of predetermined variables in the model. Only grade-point average and college cost show larger total and unmediated effects. Implications for school desegregation policy are considered. (Author)

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The Perpetuation of Segregation Across Levels of Education: A Behavioral Assessment of the Contact-Hypothesis

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Jomills Henry Braddock, II

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The Johns Hopkins University

Baltimore, Maryland

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Introductory Statement

The Center for Social Organization of Schools has two primary objectives: to develop a scientific knowledge of how schools affect their students, and to use this knowledge to develop better school practices and organization.

The Center works through four programs to achieve its objectives. The Studies in School Desegregation program applies the basic theories of social organization of schools to study the internal conditions of desegregated schools, the feasibility of alternative desegregation policies, and the interrelation of school desegregation with other equity issues such as housing and job desegregation. The School Organization program is currently concerned with authority-control structures, task structures, reward systems, and peer group processes in schools. It has produced a large-scale study of the effects of open schools, has developed Student Team Learning Instructional processes for teaching various subjects in elementary and secondary schools, and has produced a computerized system for school-wide attendance monitoring. The School Process and Career Development program is studying transitions from high school to post secondary institutions and the role of schooling in the development of career plans and the actualization of labor market outcomes. The Studies in Delinquency and School Environments program is examining the interaction of school environments, school experiences, and individual characteristics in relation to in-school and later-life delinquency.

This report, prepared by the Studies in School Desegregation program, examines whether black students who attend desegregated high schools are more likely to attend desegregated colleges.

Abstract

Using data from a survey of 253 randomly selected black students attending two predominantly black (PBI's) and two predominantly white colleges (PWI's) in Florida, this study examines the hypothesis that black students who attend desegregated high schools are more likely to attend desegregated colleges. Sex and social class as background variables along with schooling and achievement factors (high school racial composition and grade-point average) and college inducements (academic reputation, financial aid, low cost) are linked in a causal model to the predominant racial type of the college attended. The results indicate that choice of a desegregated college (PWI) depends on various types of antecedents, however, desegregation practice--the experience of having attended a desegregated high school--manifests one of the largest direct and total effects among the total set of predetermined variables in the model. Only grade point average and college cost show larger total and unmediated effects. Implications for school desegregation policy are considered.

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Introduction

Despite an abundance of scholarly research on school desegregation, the issue of whether school desegregation is a socially desirable goal continues to be the subject of heated controversy. Opponents contend that the costs of desegregation--busing and white-flight--far outweigh the potential benefits--higher aspiration and achievement levels among minority group individuals and reduction of prejudice among majority and minority group members. Proponents, on the other hand, argue the obverse, and further suggest that school desegregation must be viewed as both a moral and constitutional question which is based on the core democratic values of the society.

Research in this area has, for the most part, focused on effects of school desegregation on cognitive outcomes, i.e., achievement test scores or attitude change. Few studies have focused on either the behavioral consequences of school desegregation or its long-term effects (Crain, 1970, 1971; Crain & Weisman, 1972; Porter, 1974; Crain & Mahard, 1978; McPartland, 1978; Wilson, 1979). These studies have generally addressed the question of desegregation outcomes within a status attainment framework. That is, prior research has examined the educational and occupational attainments of blacks with segregated and desegregated elementary-secondary school experiences. For a systematic review and commentary on the effects of desegregation on a wide range of issues, see St. John (1975) and for a review of theory and policy see Pettigrew (1971). Nevertheless, the long-term effects of school desegregation on social

integration have been largely overlooked. Given the historical pattern of racial separation in the United States, however, it seems particularly appropriate--25 years following the Brown decision--that social scientists should address the question "what effects, if any, has school desegregation had on the structural assimilation[1] of black Americans?" The contact-hypothesis provides a useful framework for examining this issue.

The Contact-Hypothesis and School Desegregation

One of the most important and compelling aspects of racial segregation in America is the tendency for it--voluntarily or involuntarily--to become self-perpetuating. Previous research has suggested that racial segregation engenders and nurtures a form of social inertia and avoidance learning (Pettigrew, 1965) that slows the pace of school desegregation efforts which are already hampered by social, economic, and political conflicts and inequities.

Before Brown (1954), particularly in the South, students were educated under a dual system which offered putatively inferior training to blacks. When southern schools began to desegregate, blacks were granted the legal right to attend formerly all-white elementary and secondary schools. However, in part because of anticipated racial hostility and the belief that prior differences in educational preparation would place them at a competitive disadvantage in desegregated schools, many southern blacks were ambivalent about and reluctant to take full advantage of this newly acquired educational opportunity. As Pettigrew (1965) suggests, this reluctance stems not from disapproval, but from an uneasiness and uncertainty about the new situations. Blacks have learned to avoid and withdraw from interracial situations where they may experience pain and indignation. Even though these situations

change and the pain and indignation are lessened or removed altgether, many blacks remain understandably reluctant to test them and discover the alterations.

The contact-hypothesis states that exposure to interracial contact under certain specified conditions produces generally positive changes in intergroup attitudes and interaction patterns. The conditions are that the groups in contact must: a) possess equal status, b) share common goals, c) interact cooperatively, and d) have environmental support. Race and education researchers have often found that school desegregation, particularly in the South, provides fertile grounds to examine propositions derived from the contact-hypothesis (Campbell, 1958; Hyman & Sheatsley, 1964; Braddock, 1974; Bullock, 1978). This research has focused mainly on attitudes and small group associations presumed to be affected by interracial contacts in schools. Still, there is much that social scientists do not yet fully understand concerning interracial attitudes and sociometric patterns.

The aim of this study is to broaden the focus of social science concern with the effects of school desegregation to include long-term, behavioral outcomes. By examining the segregation-desegregation pattern of students across levels of education, we can provide an empirical behavioral test of the contact-hypothesis and, at the same time, assess the viability of school desegregation as a social policy aimed at incorporating black Americans into society's mainstream.

The Model

With the contact-hypothesis as the general framework, a model of determinants of attendance at desegregated colleges is developed using structural equations models and multivariate regression analysis (Duncan,

1975). Specifically, standardized regression (and sheaf) coefficients are used to estimate the net or direct effects of background, desegregated secondary school experience, academic qualifications, and college inducements on attendance at a predominantly white college or university (PWI). Figure 1 shows the pattern of causal relations in the model of attendance at PWI's. There are five causal steps in the model. Socioeconomic

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Figure 1 About Here

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level and sex, as exogenous variables, begin the sequence and determine the second step, high school racial composition. The third step consists of high school grades (i.e., academic qualifications). The fourth step consists of a cluster of indicators--availability of financial aid, academic reputation of the college and college costs--representing the construct termed college inducements. The final step, of course, is represented by the predominant racial composition of the college attended.

The relevance of the background variables to the model is obvious. Social class, in part, determines neighborhood and high school attendance area. Middle class black families are more likely to live in integrated communities, and their children are thus more likely to attend desegregated high schools. Therefore, SES is included in the model in order to rule out the alternative explanation that desegregation perpetuation is the result of class related self-selection processes. Sex is also included in the model to eliminate self-selection bias, because females at the elementary and secondary school level often earn better grades than males and PWI's are often more selective than PBI's in regard to academic qualifications.

High school racial composition is included as our measure of secondary high school desegregation in the model. Our primary concern in this analysis will be with the net or main effects of this variable on attendance at a predominantly white college or university. This strategy will allow us to determine the extent to which desegregation, at least within educational settings, is self-reinforcing.

"Desegregation practice," as the process may be termed, is expected to exert a sizable and important influence on attendance at a PWI net of all other variables in the model including those mediating this effect. In other words, desegregation practice reflects a reality that goes beyond the relationship between high school racial composition and achievement which in turn influences access to more academically selective colleges and universities. Because there are no clear indicators of the dimensions underlying the desegregation practice construct, we infer that it serves as a proxy for a sense of personal control and/or attachment to an ideology favoring a solidary multiracial society, where either or both are consequences of the extent and quality of prior interracial experiences. For example, black students who perform well in high schools in which they are a minority may be more inclined to approach a similar college or university setting with positive expectations than those whose performance has been high (in both relative and absolute terms) in a majority--or all--black high school. The latter may be more guided by traditional myths and stereotypes concerning black-white intellectual differences and, having no experiential basis to counterbalance such influences, may be disinclined to choose a predominantly white college. Such a pattern would exemplify what Pettigrew has termed avoidance learning. Further, although the social-psychological literature in this

field is not entirely unequivocal, the evidence generally supports the prejudice-reduction function of interracial contact. Thus, the alternative explanations here are consistent with our model.

Our indicator of academic credentials or college qualifications is high school grade-point average,[2] a factor which generally is weighted quite heavily in the college admissions process.

The cluster of variables representing college inducements--academic reputation of the college, availability of financial aid, and college cost--are also important to our model of determinants of attendance at predominantly white institutions. Colleges and universities select students, often from a vast pool of qualified applicants. But students also choose, perhaps within somewhat more limited parameters, colleges and universities they desire to attend. A student's choice of a college or university is often made on the basis of a constellation of institutional attributes which make some particular institutions more or less attractive than others. We will look at three: college's academic reputation, inexpensiveness, and the availability of financial aid. Given the relative economic disadvantage that many blacks face, the significance of the financial inducements--availability of financial aid and college cost--included in the model are obvious.

Two important dimensions are associated with academic reputation as a college inducement. The first is the quality and type of training available at different institutions. The second dimension--status conferred via association--is more subjective. For example, intellectually "average" students who attend a prestigious university may be viewed by others (and themselves as well) as brighter or otherwise more competent than intellectually "brilliant" students who attend an institution with

relatively low prestige. In light of empirical evidence suggesting black disadvantage relative to both achievement and social status, we would expect that both dimensions are uniformly salient in the college selection process.

The analysis begins by examining the main effects of high school desegregation on attendance at PWI's. Rival hypotheses based on self-selection and college inducements are then considered.

Data and Measures

Data

The respondents consist of two hundred fifty-three black, full-time undergraduates who completed and returned a mailed questionnaire during the Fall, 1973. Following the initial mailing and a postcard reminder, a second wave of questionnaires was sent. These efforts yielded a seventy-six percent response rate from the randomly selected subjects who at the time of the study were enrolled in one of four colleges and universities located in Florida. The questionnaire was designed to assess various social psychological and political attitudes of the respondents, their subjective perceptions of their college environments, social networks, and level of participation in various activities both on and off campus along with extensive demographic data.

The institutions were selected with several considerations in mind. To minimize the potential biasing effects of structural and contextual variables such as size, proximity to home, and social climate of surrounding community etc., predominantly black (PBI) and predominantly white (PWI) institutions were selected and paired in the following way: (a) two large state universities--one PBI and one PWI--both located in the same medium-sized city, and (b) two small private colleges--one PBI and

one PWI--both located in the same large city. However, due to sub-sample size limitations, analyses of school race by control types is not feasible. Consequently, the analyses performed in this paper are based on pooled samples of race types only--PBI and PWI--which do not differ significantly in either sample size or response rate.

Variable Measurement

Sex (Xa) - Code: males = 1; females = 0.

SES (Xb) - is represented by a composite index of: total family income, mother's education, father's education, mother's occupation, and father's occupation. Our data analysis treats the SES composite index as a "blocked" variable in the model. Correspondingly, the coefficients representing paths emanating from this source are sheaf values rather than beta weights (Heise, 1972).

High School Racial Composition (X_1) - student estimate of the racial composition of his/her school. Code: $<50\%$ black = 1; $\geq 50\%$ = 0.

High School Grade Point Average (X_2) - student's self-reported estimate of his/her average grades earned during high school. Code: $\geq$ B = 1; $<$B = 0.

Financial Aid (X_4) - student report about whether or not financial assistance was an important factor affecting their choice of the college or university they currently attend. Code: Major/Minor Influence = 1; No Influence = 0.

College Reputation (X_5) - student report about whether or not the academic reputation of the institution was an important factor affecting their choice of their present school. Code: Major/Minor Influence = 1, No Influence = 0.

College Cost (X_6) - student report about whether or not the relatively "low cost" of the college was an important factor affecting their choice of their present institution. Code: Major/Minor Influence = 1; No Influence = 0.

Desegregated College Attendance (X_7) - racial type of the institution in which the student was enrolled during the time of the survey. Code: PWI = 1; PBT = 0.

Table 1 shows the means, standard deviations, and zero-order correlations among the variables in the model.

Table 1 About Here

Findings

Our data provide strong evidence supporting the self-perpetuating tendencies of early school desegregation. Table 2 presents the findings in reduced form structural equations for the full model.

Table 2 About Here

Among the predetermined variables in the research model, high school racial composition exhibits one of the largest (.23) main effects on attendance at a predominantly white college. Only high school grades (.24) and college costs (-.27) show larger effects. We emphasize here that this result is as depicted in the pattern of causal relations in the model, net of the influence of social class background and sex.

We noted earlier that both social class and sex may be potential sources of bias due to self-selection. The data do indicate that SES is related to high school racial composition; thus, there is some class-determined allocation of black students into desegregated high schools. However, the key issue in this research is the continued effect of desegregation practice on choice of attendance at a predominantly white university net of the SES self-selection factor. The net or main effect of desegregation practice found for this sample of black students indicates that it is clearly an important factor independent of self-selection into high school due to SES.

Moreover, high school racial composition exhibits a larger main and total non-spurious effect than sex--the other potential self-selection biasing factor. As expected, sex is related to high school grades, which mediates a sizable share of its total effect on attendance at a PWI. However, this self-selection linkage, though important, does not substantially reduce the main effects of high school racial composition.

High school racial composition's effect on attendance at PWI's is mediated only slightly (.01) by the academic performance measure--grade point average. This is true even though, as we might expect, high school percent white is significantly inversely related (-.13) to class rank. This finding bolsters the argument that desegregation practice affords black students the opportunity to develop confidence in their scholastic abilities and their adaptive and coping skills in majority white settings even though their scholastic performances are likely to gain them less recognition than they could expect to receive in majority or all black educational settings. Nevertheless, the main effect of high school racial composition on attendance at PWI's is not reduced by the impact of academic performance measures.

The addition of our measures of college inducements--academic reputation of the college, college cost, and the availability of financial aid--also fails to substantially reduce the main effects of high school racial composition on attendance at PWI's. In fact, the total effect of high school racial composition in the full model (.22) is only slightly less than its zero-order correlation (.25) with attendance at predominantly white colleges and universities. This suggests that we can be fairly confident that the perpetuation of desegregation across levels of education

is a non-spurious association, at least in terms of the indicators in the present model.

Summary and Conclusions

This study has addressed the general question of whether or not school desegregation as a social intervention strategy has long-term effects on breaking down the self-perpetuating cycle of racial segregation in America. The findings offer convincing evidence that it does. We have shown that blacks who attend college and who graduated from desegregated high schools are much more likely to attend a predominantly white college or university than their counterparts who graduated from segregated high schools.

This pattern remained stable even when potential sex and social class self-selection factors were taken into account. That is, the relationship was not spurious and could not be dismissed as being caused by differential social class allocation due to residential location, nor could it be explained in terms of differential college selectivity due to higher secondary school grade performance by females. Thus, the model and the results allow us to rule out the two major alternative interpretations of the desegregation perpetuation cycle.

In terms of the contact-hypothesis and its relationship to the structural assimilation of blacks into the American mainstream, the findings of this study are also supportive. Black students with high school desegregation experience are more inclined than their segretated counterparts to continue their educational pursuits, net of background factors, college qualifications, and college inducements, in predominantly white settings; this strongly suggests that desegregation practice does ameliorate the social inertia and avoidance learning that racial segregation engenders. This finding, coupled with those of other investigations indicating that

blacks who attend desegregated schools develop networks, select college major fields, and find jobs in non-traditional fields, provides some evidence that school desegregation does facilitate the movement of blacks into society's mainstream in a number of ways.

Although these results are encouraging, we must be cautious in generalizing. This study was based on a representative but limited sample of black college students. The effects of secondary school desegregation on attendance at predominantly white colleges may be different outside the state of Florida and across regions, levels (2 yr. - 4 yr.), and types (public-private) of educational environments. Thus, there is an obvious need to replicate this research with a much broader sample. It might also prove fruitful for future research, using national longitudinal data, to examine the long-term effects of school desegregation on other aspects of social mobility and social integration, including more detailed and up-to-date studies of such outcomes as educational and occupational attainment and social and political participation.

Notes

1. As Gordon (1964) points out, it is important to distinguish between two distinct types of assimilation: cultural and structural. Cultural assimilation refers to the process whereby an ethnic or racial group adopts and absorbs the cultrual and behavioral patterns of the larger society. Structural assimilation, on the other hand, refers to the process whereby these groups gain entry into the social cliques, organizations, institutional activities, and general civic life of the host society. The latter category can be further subdivided into "secondary relationships"--activities involving employment, politics, or other instrumental tasks, and "primary relationships"--activities involving education, communal worship, recreation, or other activities which foster friendships and other patterns of close interpersonal association. The importance of this point is underscored by the work of Crain (1971) which shows that blacks who attended desegregated schools attained higher status (educationally and occupationally) than blacks who attended largely segregated schools. These differences were attributed, in large measure, to benefits provided by the interracial associations and informal contacts available only in the desegregated settings.

2. Both grade-point average and class rank are routinely used by colleges and universities to assess the scholastic potential of prospective students. Clearly class standing is strongly related to and in large measure dependent on grades earned while in high school. Ideally, our model should include both indicators in order to differentiate absolute performance (grades) and relative performance (rank). The academic

achievements of black students in predomantly white schools are often overshadowed by their white classmates. Thus, the relative significance of black student academic performance can be expected to vary across levels of desegregated school experience. The distinction between absolute and relative academic performance seems particularly important in our view of the perpetuation of desegregation across levels of education. For example, a black student whose academic accomplishments (grades) in a desegregated high school are overshadowed by white classmates may elect to attend a predominantly black college where a superior performance academically will earn greater recognition than in a predominantly white college where the chances of similar scholastic recognition are much less. The latter occurrence, will of course, buttress the arguments favoring desegregation practice. Notwithstanding the strong theoretical rationale for including both grades and class rank in the model the present analysis excludes the latter. Because high school grades and class rank are strongly intercorrelated (.64) with each other their simultaneous inclusion in our model presents the problem of multicollinearity (Gordon, 1968) which makes difficult the interpretation of the relative unique effects of each performance measure. However, because both variables are of theoretical interest in the present study we performed the regression analysis on the research model using grades and rank, each singly and in combination. The results indicate that the desegregation perpetuation effect (i.e., attendance at a desegregated high school leading to attendance at a desegregated college) remains quite stable in every instance. Specifically, the

standardized regression coefficients indicating the main effect of high school racial composition on attendance at predominantly white colleges are (.23) with grades only, (.24) with rank only, and (.23) with both grades and rank included. However, although the net effect of grades (.30) remains somewhat stable (.24) when both measures of academic performance are included, the main effect of class rank (.23) is diminished considerably (.08) with the addition of grades to the model.

Figure 1: Path Model of Determinants of Attendance
at Predominantly White Colleges

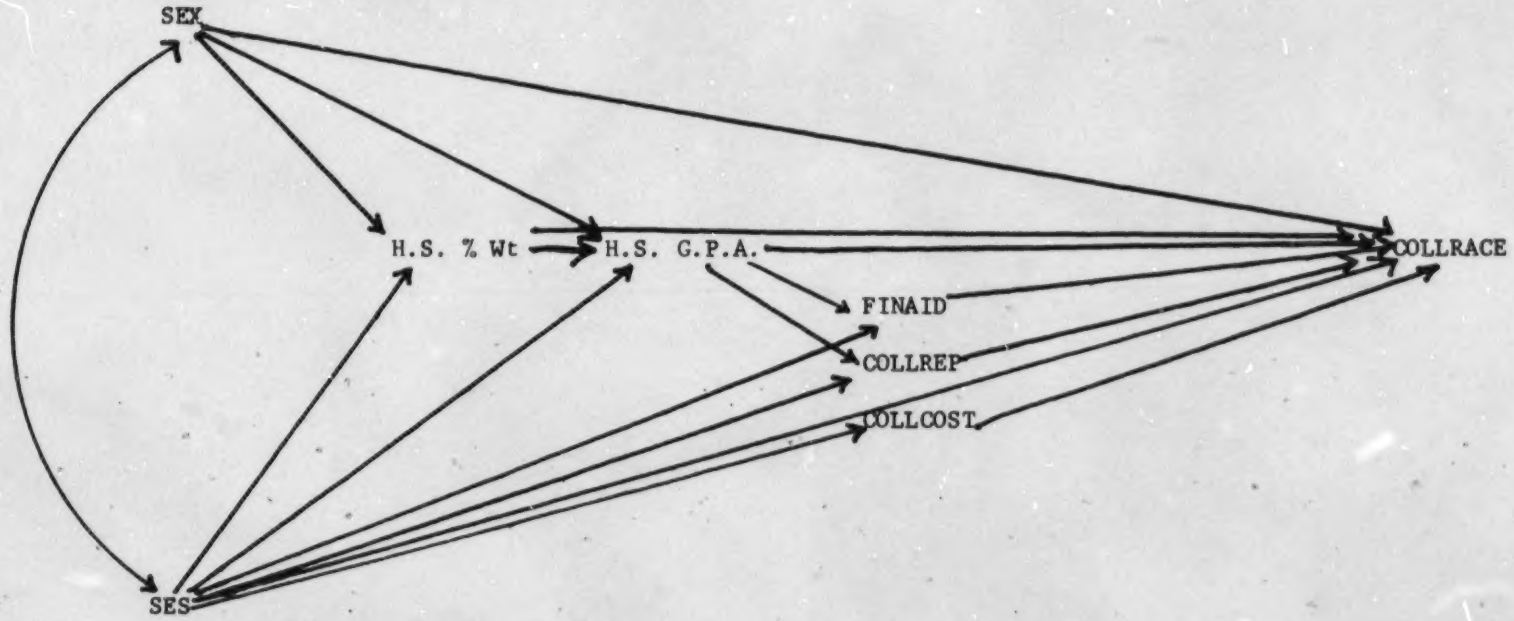

Table 1

Correlation Matrix, Means, and Standard Deviations of Variables in the Model of Determinants of Attendance at Predominantly White Colleges (N=253)

	SEX	SES	H.S.%Wt	H.S. G.P.A.	FINAID	COLLREP	COLLCOST	COLLRACE
SEX								
SES	.11ns							
H.S. % Wt	-.02ns	.17**						
H.S. G.P.A.	-.21**	.19**	-.03ns					
FINAID	-.08ns	.30**	.00ns	.15*				
COLLREP	-.12*	.14*	.07ns	.17**	.11ns			
COLLCOST	-.04ns	.12*	-.07ns	.01ns	.04ns	.23**		
COLLRACE	-.08ns	.09ns	.25**	.33**	.16*	.15*	.22**	
Mean	.46	--	.44	3.24	.60	.77	.60	.45
Std. Dev.	.50	--	.50	1.58	.49	.42	.49	.50

(ns) Not Significant
* Significant at .05 level
** Significant at .01 level

Table 2

Coefficients (Standardized Regression or Sheaf Coefficients) of Variables in Standard Form in Reduced Form and Structural Equations of a Model of Determinants of Attendance at Predominantly White Colleges (Full Model Only; N=253)

Dependent Variable	Predetermined Variable	Total Effect	Indirect Effects via X_1 % Wt	X_2 HSGPA	X_3 FINAID	X_4 ACDREP	X_5 COLCOST	Direct Effect
X_7 CollRace	X_a Sex	-.14	--	-.05	--	--	--	-.09
	X_b SES	.22	.04	.05	.05	.02	-.03	.09
	X_1 H.S. %Wt	.24	--	.01	--	--	--	.23
	X_2 Hsgpa	.29	--	--	.03	.02	--	.24
	X_3 Finaid	.15	--	--	--	--	--	.15
	X_4 Acdrep	.15	--	--	--	--	--	.15
	X_5 Collcost	-.27	--	--	--	--	--	-.27

R^2 = .25

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